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L17	0	(((network or matrix) with (((represent or representing or represented or display or displayed or displaying) with (graphical or graphically)) or visualize or visualized or visualizing) and (link or relationship or connection) with (change or changed or changing or alter or altered or altering or rearrange or rearranged or rearranging) and (new or different or second or other or another) with (thought or idea or information or data)) and (indicia or icon or symbol) and (central or main or middle or center or primary) with (idea or thought or data or information)).clm.	US-PGPUB	OR	ON	2006/11/26 13:38
L18	0	(((network or matrix) with (((represent or representing or represented or display or displayed or displaying) with (graphical or graphically)) or visualize or visualized or visualizing) and (link or relationship or connection) with (change or changed or changing or alter or altered or altering or rearrange or rearranged or rearranging) and (new or different or second or other or another) with (thought or idea or information or data)) and (indicia or icon or symbol) and (central or main or middle or center or primary)).clm.	US-PGPUB	OR	ON	2006/11/26 13:39

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L1	7367	(network or matrix) with (((represent or representing or represented or display or displayed or displaying) with (graphical or graphically)) or visualize or visualized or visualizing)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/11/26 13:12
L2	76	1 same (link or relationship or connection) with (change or changed or changing or alter or altered or altering or rearrange or rearranged or rearranging)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/11/26 13:26
L3	1	2 same (correspond or corresponding or corresponded or correlate or correlating or correlated or correlation or correspondence or associate or associated or associating or association) with (new or different or second or other or another) near5 (thought or idea or information or data)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/11/26 13:26
L4	6	2 same (new or different or second or other or another) near5 (thought or idea or information or data)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/11/26 13:21
L5	5	4 not 3	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/11/26 13:20
L6	212	715/734-739.ccls. and (link or relationship or connection) with (change or changed or changing or alter or altered or altering or rearrange or rearranged or rearranging)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/11/26 13:21
L7	212	6 and (link or relationship or connection) with (change or changed or changing or alter or altered or altering or rearrange or rearranged or rearranging)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/11/26 13:21
L8	162	6 and (new or different or second or other or another) near5 (thought or idea or information or data)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/11/26 13:21

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L9	18	715/734-739.ccls. and (link or relationship or connection) with (change or changed or changing or alter or altered or altering or rearrange or rearranged or rearranging) same (new or different or second or other or another) near5 (thought or idea or information or data)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/11/26 13:22
L10	18	9 not 4	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/11/26 13:22
L11	1193	1 and (link or relationship or connection) with (change or changed or changing or alter or altered or altering or rearrange or rearranged or rearranging)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/11/26 13:26
L12	27	1 and (link or relationship or connection) with (change or changed or changing or alter or altered or altering or rearrange or rearranged or rearranging) same (correspond or corresponding or corresponded or correlate or correlating or correlated or correlation or correspondence or associate or associated or associating or association) with (new or different or second or other or another) near5 (thought or idea or information or data)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/11/26 13:26
L13	27	12 not 9	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/11/26 13:26
L14	21	13 and (icon or indicia or symbol)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/11/26 13:27


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1 [Courses: An introduction to sketch-based interfaces](#)



Joseph LaViola, Randall Davis, Takeo Igarashi

July 2006 **Material presented at the ACM SIGGRAPH 2006 conference SIGGRAPH '06****Publisher:** ACM PressFull text available: [pdf\(31.58 MB\)](#) Additional Information: [full citation](#), [abstract](#)

Sketch-based interfaces are a natural, pencil-and-paper-like approach to interacting with a variety of applications, including conceptual modeling, animation, and note-taking systems. This course offers an in-depth discussion of sketch-based interface design, ranging from simple gestural commands to complex sketch-understanding systems. Attendees will learn how these interfaces are designed and how to develop their own.

2 [Visualizing geospatial data](#)



Theresa Marie Rhyne, Alan MacEachren, Theresa-Marie Rhyne

August 2004 **ACM SIGGRAPH 2004 Course Notes SIGGRAPH '04****Publisher:** ACM PressFull text available: [pdf\(14.01 MB\)](#) Additional Information: [full citation](#), [abstract](#)

This course reviews concepts and highlights new directions in GeoVisualization. We review four levels of integrating geospatial data and geographic information systems (GIS) with scientific and information visualization (VIS) methods. These include:• Rudimentary: minimal data sharing between the GIS and Vis systems• Operational: consistency of geospatial data• Functional: transparent communication between the GIS and Vis systems• Merged: one comprehensive toolkit environmentW ...

3 [Projectors: advanced graphics and vision techniques](#)



Ramesh Raskar

August 2004 **ACM SIGGRAPH 2004 Course Notes SIGGRAPH '04****Publisher:** ACM PressFull text available: [pdf\(6.53 MB\)](#) Additional Information: [full citation](#)

4 [Courses: Exploiting perception in high-fidelity virtual environments](#)



Mashhuda Glencross, Alan G. Chalmers, Ming C. Lin, Miguel A. Otaduy, Diego Gutierrez

July 2006 **Material presented at the ACM SIGGRAPH 2006 conference SIGGRAPH '06**

Publisher: ACM PressFull text available:  pdf(5.25 MB) Additional Information: [full citation](#), [abstract](#)

This course introduces high-fidelity virtual environments and explains the key components required to build compelling environments. Then it details perceptually inspired techniques that facilitate high-fidelity rendering, collaboration, and complex interaction in these virtual environments. Particular emphasis is placed on real applications, with several live demonstrations.

5 Courses: Spatial augmented reality

Oliver Bimber, Ramesh Raskar

July 2006 **Material presented at the ACM SIGGRAPH 2006 conference SIGGRAPH '06****Publisher:** ACM PressFull text available:  pdf(22.57 MB) Additional Information: [full citation](#), [abstract](#)

A survey of the latest techniques for augmented reality, which go beyond conventional head-mounted displays. The tutorial introduces prototypes, explains rendering and calibration algorithms, discusses case studies, and presents practical experience. Attendees learn about new applications enabled by current augmented-reality techniques that combine the real and virtual worlds in art, science, education, and industry.

6 Courses: State of the art in interactive ray tracing

Peter Shirley

July 2006 **Material presented at the ACM SIGGRAPH 2006 conference SIGGRAPH '06****Publisher:** ACM PressFull text available:  pdf(14.08 MB) Additional Information: [full citation](#), [abstract](#)

Recent improvements in computer hardware have allowed ray tracing to be used in some interactive applications. The trends in architecture and expansions of geometric model should increase the use of interactive ray tracing. This course presents recent and often not-yet published work on interactive ray tracing.

7 Real-time shading

Marc Olano, Kurt Akeley, John C. Hart, Wolfgang Heidrich, Michael McCool, Jason L. Mitchell, Randi Rost

August 2004 **ACM SIGGRAPH 2004 Course Notes SIGGRAPH '04****Publisher:** ACM PressFull text available:  pdf(7.39 MB) Additional Information: [full citation](#), [abstract](#)

Real-time procedural shading was once seen as a distant dream. When the first version of this course was offered four years ago, real-time shading was possible, but only with one-of-a-kind hardware or by combining the effects of tens to hundreds of rendering passes. Today, almost every new computer comes with graphics hardware capable of interactively executing shaders of thousands to tens of thousands of instructions. This course has been redesigned to address today's real-time shading capabili ...

8 IS '97: model curriculum and guidelines for undergraduate degree programs in information systems

Gordon B. Davis, John T. Gorgone, J. Daniel Couger, David L. Feinstein, Herbert E. Longenecker

December 1996 **ACM SIGMIS Database , Guidelines for undergraduate degree programs on Model curriculum and guidelines for undergraduate degree programs in information systems IS '97**, Volume 28 Issue 1**Publisher:** ACM PressFull text available:  pdf(7.24 MB) Additional Information: [full citation](#), [citations](#)

9 Evaluation of an inference network-based retrieval model



Howard Turtle, W. Bruce Croft

July 1991 **ACM Transactions on Information Systems (TOIS)**, Volume 9 Issue 3

Publisher: ACM Press

Full text available: pdf(2.40 MB)

Additional Information: [full citation](#), [references](#), [citations](#), [index terms](#), [review](#)

Keywords: document retrieval, inference networks, network retrieval models

10 Fast detection of communication patterns in distributed executions

Thomas Kunz, Michiel F. H. Seuren

November 1997 **Proceedings of the 1997 conference of the Centre for Advanced Studies on Collaborative research**

Publisher: IBM Press

Full text available: pdf(4.21 MB)

Additional Information: [full citation](#), [abstract](#), [references](#), [index terms](#)

Understanding distributed applications is a tedious and difficult task. Visualizations based on process-time diagrams are often used to obtain a better understanding of the execution of the application. The visualization tool we use is Poet, an event tracer developed at the University of Waterloo. However, these diagrams are often very complex and do not provide the user with the desired overview of the application. In our experience, such tools display repeated occurrences of non-trivial commun ...

11 Computing curricula 2001



September 2001 **Journal on Educational Resources in Computing (JERIC)**

Publisher: ACM Press

Full text available: pdf(613.63 KB)

html(2.78 KB)

Additional Information: [full citation](#), [references](#), [citations](#), [index terms](#)

12 Graphical interaction with heterogeneous databases

T. Catarci, G. Santucci, J. Cardiff

May 1997 **The VLDB Journal – The International Journal on Very Large Data Bases**, Volume 6 Issue 2

Publisher: Springer-Verlag New York, Inc.

Full text available: pdf(602.82 KB)

Additional Information: [full citation](#), [abstract](#), [citations](#), [index terms](#)

During the past few years our research efforts have been inspired by two different needs. On one hand, the number of non-expert users accessing databases is growing apace. On the other, information systems will no longer be characterized by a single centralized architecture, but rather by several heterogeneous component systems. In order to address such needs we have designed a new query system with both user-oriented and multidatabase features. The system's main components are an adaptive visua ...

13 Inference networks for document retrieval



H. Turtle, W. B. Croft

December 1989 **Proceedings of the 13th annual international ACM SIGIR conference on Research and development in information retrieval**

Publisher: ACM Press

Full text available: pdf(1.65 MB)

Additional Information: [full citation](#), [abstract](#), [references](#), [citations](#), [index terms](#)

The use of inference networks to support document retrieval is introduced. A network-based retrieval model is described and compared to conventional probabilistic and Boolean models.

14 Technical reports



SIGACT News Staff

January 1980 **ACM SIGACT News**, Volume 12 Issue 1

Publisher: ACM Press

Full text available: pdf(5.28 MB) Additional Information: [full citation](#)



15 Pen computing: a technology overview and a vision



André Meyer

July 1995 **ACM SIGCHI Bulletin**, Volume 27 Issue 3

Publisher: ACM Press

Full text available: pdf(5.14 MB) Additional Information: [full citation](#), [abstract](#), [citations](#), [index terms](#)

This work gives an overview of a new technology that is attracting growing interest in public as well as in the computer industry itself. The visible difference from other technologies is in the use of a pen or pencil as the primary means of interaction between a user and a machine, picking up the familiar pen and paper interface metaphor. From this follows a set of consequences that will be analyzed and put into context with other emerging technologies and visions. Starting with a short historic ...



16 Courses: Discrete differential geometry: an applied introduction



Eitan Grinspun, Mathieu Desbrun

July 2006 **Material presented at the ACM SIGGRAPH 2006 conference SIGGRAPH '06**

Publisher: ACM Press

Full text available: pdf(4.80 MB) Additional Information: [full citation](#), [abstract](#)

An introduction to fundamentals of discrete differential geometry (DDG), a nascent area of computational science with exciting simulation and geometry processing applications. Lectures discuss continuous and discrete geometry in the context of cloth, shell, and fluid simulation as well as remeshing and parameterization problems.



17 A software model and specification language for non-WIMP user interfaces



Robert J. K. Jacob, Leonidas Deligiannidis, Stephen Morrison

March 1999 **ACM Transactions on Computer-Human Interaction (TOCHI)**, Volume 6 Issue 1

Publisher: ACM Press

Full text available: pdf(574.62 KB) Additional Information: [full citation](#), [abstract](#), [references](#), [citations](#), [index terms](#)

We present a software model and language for describing and programming the fine-grained aspects of interaction in a non-WIMP user interface, such as a virtual environment. Our approach is based on our view that the essence of a non-WIMP dialogue is a set of continuous relationships—most of which are temporary. The model combines a data-flow or constraint-like component for the continuous relationships with an event-based component for discrete interactions, which can enable or disable ...

Keywords: PMIW, interaction techniques, non-WIMP interface, specification language, state transition diagram, user interface management system (UIMS)



18

GPGPU: general purpose computation on graphics hardware





David Luebke, Mark Harris, Jens Krüger, Tim Purcell, Naga Govindaraju, Ian Buck, Cliff Woolley, Aaron Lefohn

August 2004 **ACM SIGGRAPH 2004 Course Notes SIGGRAPH '04**

Publisher: ACM Press

Full text available: pdf(63.03 MB) Additional Information: [full citation](#), [abstract](#), [citations](#)

The graphics processor (GPU) on today's commodity video cards has evolved into an extremely powerful and flexible processor. The latest graphics architectures provide tremendous memory bandwidth and computational horsepower, with fully programmable vertex and pixel processing units that support vector operations up to full IEEE floating point precision. High level languages have emerged for graphics hardware, making this computational power accessible. Architecturally, GPUs are highly parallel s ...

19 The elements of nature: interactive and realistic techniques



Oliver Deussen, David S. Ebert, Ron Fedkiw, F. Kenton Musgrave, Przemyslaw Prusinkiewicz, Doug Roble, Jos Stam, Jerry Tessendorf

August 2004 **ACM SIGGRAPH 2004 Course Notes SIGGRAPH '04**

Publisher: ACM Press

Full text available: pdf(17.65 MB) Additional Information: [full citation](#), [abstract](#)

This updated course on simulating natural phenomena will cover the latest research and production techniques for simulating most of the elements of nature. The presenters will provide movie production, interactive simulation, and research perspectives on the difficult task of photorealistic modeling, rendering, and animation of natural phenomena. The course offers a nice balance of the latest interactive graphics hardware-based simulation techniques and the latest physics-based simulation techni ...

20 Link and channel measurement: A simple mechanism for capturing and replaying wireless channels



Glenn Judd, Peter Steenkiste

August 2005 **Proceeding of the 2005 ACM SIGCOMM workshop on Experimental approaches to wireless network design and analysis E-WIND '05**

Publisher: ACM Press

Full text available: pdf(6.06 MB) Additional Information: [full citation](#), [abstract](#), [references](#), [index terms](#)

Physical layer wireless network emulation has the potential to be a powerful experimental tool. An important challenge in physical emulation, and traditional simulation, is to accurately model the wireless channel. In this paper we examine the possibility of using on-card signal strength measurements to capture wireless channel traces. A key advantage of this approach is the simplicity and ubiquity with which these measurements can be obtained since virtually all wireless devices provide the req ...

Keywords: channel capture, emulation, wireless

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AJAW Tabulator: To Do

Given that outlinew view can display a **graph**, maybe do it by example ... get from the user the access policy which the **new information** will be subject to. ...
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Ahoref: Websites as graphs

Gawain sent me this **link** which outputs a website's HTML as a **graph**. ... social **network** analysis (sna) tool which **represents** your blogging **network**. but the ...
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Techquila - Web Application Development

This means that if at a later date **new links** are required between the Person ... The customer can maintain and **rearrange** content, **information** structure and ...
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allow for adaptation both in integrating **new information** ... The NetExecutor then uses this **network link** to download from the Coordinator the portion of ...
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An Adaptive WWW Cache Mechanism in the AI3 Network

The satellite **link** of AI3 **network** is not quite low bandwidth (1.5Mbps), ... (Figure 3 (a)) The weight of branch of **graph represents** the reference count of ...
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After a brief pause, you should see a **new network**, such as the one shown below (shown ... These are all **links** to additional sources of **information**. ...
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The problem, of course, is how do you **rearrange** 30000 facilities that ... The **new network** is designed around mail piece shape instead of class as it ...
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links. You **rearrange** the collage to refine your. exploration. ... elements; it also contains a directed **graph**. that **represents** the pages' connecting ...
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IJHCS "Web Usability" - Bieber et al. [NoFrames]

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Topic Maps - A Practical Introduction With Case Studies

Starbase's **new information** architecture creates a unified view into a ... **represent** nodes
in the semantic **network** and associations **represent links** between ...
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[PDF] Data Mining Using Links in Open Hypermedia

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Many papers **represent** the Web as a **graph** [14]. Different aspects can be mined ...
analyze, **rearrange** and mine useful **information**. However, from the **links** ...
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J. W. Pepper Music **Network** - Sheet music and music books; music software ...
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are presented as **graph** browsers. Within such a browser, the user can view and **rearrange**
the displayed **network**. create **new** nodes and **links** (restricted to ...
www.ipsi.fraunhofer.de/~publications/concert/1994/MHVR94.ps.Z - [Similar pages](#)

Incremental plotting of network topologies and other graphs ...

The method of claim 15 wherein the connection label **information** includes a cost
parameter label that reflects the bandwidth capacity of the **network link** ...
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When considering a thesaurus as a **network** of **links** interesting developments within the ...
The user may use this **new information** when he makes his search, ...
https://eulero.ittig.cnr.it/EditoriaServizi/
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[DOC] %!PS-Adobe-3.0

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In Figure 1 for example, the nodes **represent** books, and the **links** ... can be seen as a **new**
way to visualize collaborative filtering **information** through the ...
research.microsoft.com/~sdrucker/papers/collabvizchi99.doc - [Similar pages](#)

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The directed **graph** displayed in figure 1.1 **represents** ... corresponding **link**; that is,
information stored about the. **link** ...